

<b>TITLE:</b>	<b>Measurement of ozone reactivity for major pesticide VOCs</b>
<b>PROBLEM:</b>	The ozone reactivity of many pesticide VOCs is not well known. Experimental measurements have been made for only a few of the pesticide VOCs most commonly used in California.
<b>PREVIOUS WORK:</b>	UC Riverside has measured the ozone reactivity of several pesticide VOCs using environmental chamber experiments. Ozone reactivities have been measured for methyl bromide and chloropicrin, which collectively account for 34% of the total statewide pesticide VOC inventory. The analytical methods developed in these studies can be used to determine the ozone reactivities of other pesticide VOCs.
<b>OBJECTIVE:</b>	Develop technically sound ozone reactivity factors for the most commonly used pesticide VOCs in California.
<b>DESCRIPTION:</b>	Measure the ozone reactivity of five pesticide VOCs using environmental chamber irradiation experiments. Compounds most likely to be measured are methyl isothiocyanate, 1,3-dichloropropene, chlorpyrifos, thiobencarb, and EPTC. These five cumulatively account for approximately 30 % of the total statewide VOC inventory and are all active ingredients. The list of compounds to be measured may change should new information become available.
<b>BENEFITS:</b>	As ozone SIPs are developed for the San Joaquin Valley and other agricultural areas in California, a sound understanding of the impacts of pesticides on ozone formation is needed. Experimentally determined ozone reactivities will improve air quality modeling and assist in future SIP development.
<b>COST:</b>	\$100,000
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NOTE: This research has been proposed for possible funding by the Air Resources Board and is not currently being performed.